

DOCKET NO:

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF

: EXAMINER:

SERIAL NO:

:

FILED:

: GROUP ART UNIT: 1796

FOR:

:

SECOND DECLARATION UNDER 37 C.F.R. § 1.132

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

Now comes Dr. Juergen Rabe, who deposes and states:

1. That I am an inventor of the above-identified application for patent in the United States.
2. That I am familiar with the U.S. Examiner's Official Action dated April 10, 2008, and the following three references applied as evidence against the pending claims:

Jakob (U.S. 2002/0127168)

EP 459,625

EP 623,553

3. That I have reviewed Jakob, EP 459,625 and EP 623,553 and have concluded that these references do not disclose, or direct one of ordinary skill in this art to, coated sodium percarbonate particles as presently claimed in the above-identified patent application including at least a sodium percarbonate core surrounded by at least one

coating layer, the coating layer including at least one inorganic coating material, the coated particles having a content of available oxygen of at least 3 % by weight, and being fizzy to such an extent that 2 g of the coated particles dissolved in 50 ml of water at 20°C generate more than 0.4 ml of gas after 2 min.

4. I have based my conclusion on the preparation methods described and used in these references, and upon the Table of data, attached, which was prepared by me or under my supervision and control.
5. The attached Table of data shows the results of several experiments in which commercial coated sodium percarbonate particles of Solvay with an initial content of available oxygen of 13.96% by weight (designated S132) have been heat treated in a fluid bed with constant air supply at different temperatures ("90 °C T below material" = 90 °C, "100 °C T below material" = 100 °C, etc.) for different times ("Minuten"), both given in the Table. The treated particles were then cooled down to ambient temperature and analyzed in order to measure their final content of available oxygen (Avox) and their fizziness ("Gasvolumen"). Fizziness was measured by dissolving 2 g of the sodium percarbonate particles in 50 ml of demineralised water at 20°C for 2 min and 5 min without stirring. The amount of gas generated during these times was measured by displacement of water in a connected graduated tube.
6. The attached Table allows one to compare the invention embodied in the above-identified patent applicaiton, of which I am an inventor, with Jakob, EP 459,625 and EP 623,553.

7. For example, Jakob broadly suggests a treatment time of as short as 2 min at 70-120°C, more preferably 80 or 85-95 °C for 5 to 60 min. See paragraph [0046] of Jakob. Notably, Jakob accomplishes treatment in a fluidized bed [0054]. However, and as shown in the attached Table, heat treatment in a fluidized bed for even 15 min at 90 °C shows no fizzyness. Treatment at 90 °C for 60 min also shows no fizzyness, while treatment at 100 °C for 60 min shows a fizzyness of only 0.2ml, as opposed to the claimed lower limit of 0.4 ml, or a 100% difference. Treatment at a temperature as low as 70 °C or 80 °C, or even 85 °C, would show similar results and would not provide a coated sodium percarbonate particle with a fizzyness of 0.4 ml. Thus, the treatments suggested by Jakob, and the Examples in Table 1 at paragraph [0054] thereof, do not disclose, or direct one of ordinary skill in this art to, coated sodium percarbonate particles as claimed herein.

8. Examples 1-4 of EP 459 625 heat sodium percarbonate at 50-70 °C for approximately 45 min, while Example 5 heats at 91-100 °C and Example 6 heats at 40-50 °C for the same time period. Such treatment at these temperatures and for these times would not produce a coated sodium percarbonate particle with a fizzyness of 0.4 ml, as claimed, as evidenced by the attached Table. See, for example, the 45 minute treatment data for both 90 and 100 °C showing nonexistent or very low (i.e., 0.1 ml) fizzyness, noting further that fizzyness decreases with decreasing treatment times and temperatures. Thus, the treatments suggested by EP 459 625, and the Examples therein, do not

- Application No. 10/539,472
- Reply to Office Action of July 10, 2007

disclose, or direct one of ordinary skill in this art to, coated sodium percarbonate particles as claimed herein.

9. EP 623 553 heats sodium parcarbonate at approximately 75 °C for approximately 45 min - 2 hrs. Treatment at this temperaturs and for these times would not produce a coated sodium percarbonate particle with a fizzyness of 0.4 ml, as claimed, as evidenced by the attached Table. See, for example, the 45 and 120 minute treatment data at 90 °C (which is a temperature much higher than that used in EP 623 553 favoring fizzyness) showing nonexistent fizzyness after 2 min (90 °C) or only 0.1 ml after 2 hr (120 minutes), noting further that fizzyness decreases with decreasing treatment temperature. Thus, the treatments suggested by EP 623 553, and the Examples therein, do not disclose or direct one of ordinary skill in this art to coated sodium percarbonate particles as claimed herein.

10. The undersigned petitioner declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.


Signature

5. September 2008
Date

S132 (AvOx: 13,96%) in fluid bed with constant air supply and following parameters:
heating until switch off of the control light; 500 g amount of PCS per batch; air supply level 6

Zeit	90°C T below material		100°C T below material		110°C T below material		120°C T below material		130°C T below material		140°C T below material	
	Minuten	Avox (%)	Gasvolumen 2 Minuten 5 (ml)	Gasvolumen 2 Minuten 5 (ml)	Avox	Gasvolumen 2 Minuten 5 (ml)						
15	14.05	0	0	13.99	0	0.05	13.78	0.25	0.6	13.68	0.4	0.8
30	14.05	0	0	13.91	0.05	0.15	13.62	0.5	0.95	13.11	1.9	2.5
45	14.06	0.05	13.86	0.1	0.25	13.37	1.3	1.9	12.39	3.2	3.9	9.7
60	14.08	0.05	13.82	0.2	0.5	12.99	2.0	2.8	11.27	4.3	5.05	2.08
75	14.02	0	0.1	13.77	0.35	0.7	12.60	2.5	3.3	10.32	5.5	6.3
90	13.95	0.05	0.15	13.71	0.5	0.85	12.36	3.1	3.75	9.23	6.3	7.0
105	13.93	0.05	0.2	13.65	0.65	1.05	11.94	3.3	4.05	8.08	7.9	8.8
120	13.91	0.1	0.2	13.58	0.85	1.3	11.56	3.8	4.5	6.79	9.0	9.75
135	13.90	0.1	0.25	13.53	0.95	1.55	11.26	4.2	4.9	5.12	10.3	11.1
150	13.90	0.15	0.3	13.49	1.1	1.75	10.85	4.8	5.55	3.52	8.2	8.5
165	13.88	0.15	0.3	13.41	1.25	1.9	10.32	5.4	6.2	2.64	5.1	5.3
180	13.84	0.2	0.4	13.32	1.45	2.05	9.89	5.9	6.85	1.78	3.6	3.7
195	13.81	0.3	0.45	13.22	1.65	2.25	9.21	6.6	7.4	1.04	2.7	2.7
210	13.79	0.35	0.6	13.11	1.85	2.55	8.76	7.2	8.0	0.64	1.9	1.9
225	13.74	0.4	0.7	12.98	2.1	2.9	8.28	7.8	8.6	0.12	1.4	1.4
240	13.69	0.5	0.85	12.88	2.3	3.2	7.69	8.3	9.0	0	1.3	1.3
255	13.65	0.6	1.0	12.76	2.55	3.35	7.18	8.7	9.4			
270	13.62	0.75	1.15	12.63	2.75	3.6	6.69	9.2	9.9			
285	13.59	0.85	1.3	12.50	2.9	3.8	6.12	9.5	10.2	stopped		
300	13.56	0.95	1.45	12.38	3.2	3.95	5.48	9.8	10.6			

the bold frames = fizzing effect visible

O Taken at al.

□ EP '625